

REMARKS/ARGUMENTS

Claims 1, 3, 5, 6, 11-18, 20, 21, 25-28, and 30-32 are pending. No new matter has been added.

Claims 1, 3, 5, 6, 11-18, 20, 21, 25-28, and 30-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The remaining claims are rejected under 35 U.S.C. § 112, second paragraph, as being dependent upon rejected base claims.

The claims are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1, 3, 5, 6, 11-18, 20, 21, 25, 28, 31, and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) in view of Schneider (US 3,733,447 A).

Claims 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) and Schneider (US 3,733,447 A) as applied to claim 6 and further in view of Davis (US 4,196,429).

Claim 30 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) and Schneider (US 3,733,447 A) as applied to claim 28 above, and further in view of Kato et al. (US 5,837,951 A).

Claims 1, 3, 5, 6, 11-18, 20, 21, 25, 28, 31, and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) in view of Chou (US 6,559,396 B1).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) and Chou (US 6,559,396 B1) as applied to claim 1 above, and further in view of Schneider (US 3,733,447 A).

Claims 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) and Chou (US 6,559,396 B1) as applied to claim 6 above, and further in view of Davis (US 4,196,429 A).

Claim 30 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenstrand et al (US 2004/0155860 A1) and Chou (US 6,559,396 B1) as applied to claim 28 above, and further in view of Kato et al. (US 5,837,951 A).

A telephonic interview was conducted with the examiner on November 9, 2010. Proposed claim amendments were discussed. The examiner indicated that the amendments appeared to distinguish the art of record. Claim 1 has been amended accordingly.

An aspect of the present invention is the integration of a tilt switch (motion sensor) on the PC board of an optical mouse. Claim 1 has been amended to more clearly set forth this aspect of the invention, and to correct the Section 112 rejections. Claim 1 as amended recites:

An optical mouse system comprising:
a printed circuit board having a plurality of circuits disposed thereon, including a detection circuit;
a contact pad comprising a plurality of stationary contacts disposed on a major surface of said printed circuit board;
a ball contact movably disposed atop said stationary contacts of said contact pad;
and
a housing enclosing said ball contact and a portion of said contact pad, said housing disposed on said major surface of said printed circuit board and encasing said ball and contact pad, at least two of said stationary contacts extending along said major surface beyond an interior of said housing from between said housing and said major surface,
the detection circuit connected to said at least two of said stationary contacts.

The claimed optical mouse comprises among other things “a printed circuit board” having circuits disposed thereon, and elements of a motion sensor, namely “contact pad” disposed on the printed circuit board, “a ball” atop the contact pads, and “a housing” enclosing the ball and contact pad. See Figs. 1 and 7 of the application as originally filed. See the specification at paragraphs [0065] and [0076]. No new matter has been added.

The art of record teach variations of a motion sensor that is a discrete device, separate from a printed circuit board of a mouse device. None of the references teach a printed circuit board of an optical mouse, where a contact pads and a ball (which comprise the motion sensor) are deposited on the printed circuit board.

The claims as amended are therefore believed to overcome the art of record.
Reconsideration is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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